

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A network ~~Network~~ device for a device network,
comprising: ~~characterized by~~

[[-]] a content detection layer adapted to detect (24, 43) ~~for detecting~~ the content type of external traffic received by said network device, and to pass ~~for passing~~ said external traffic, in dependence of the detected content type, to a content-specific convergence layer adapted to handle (25, 26, 44, 45) ~~dedicated to handling~~ the respective content type, and

[[-]] at least two ~~a set of~~ content-specific convergence layers adapted to (25, 26, 44, 45), ~~which~~ exchange network traffic with other network devices (28, 29) of said device network [[(21)]] via content-specific connections, wherein ~~whereby~~ said content-specific connections are adapted ~~suited~~ to the requirements of the respective content type, wherein

the at least two content-specific convergence layers include a common part adapted to segment a data packet of said external traffic into a plurality of corresponding data packets of a device network's internal protocol, and adapted to reassemble data packets of said device network's internal protocol into corresponding data packets of the respective external traffic, and

the common part is adapted to segment data packets of said external traffic and reassemble data packets of said device network's internal protocol for each of said at least two content-specific convergence layers.

Claim 2 (Currently Amended): The network ~~Network~~ device according to claim 1, wherein ~~characterized in that~~ one of said content types is real-time critical data, and ~~whereby~~ said at least two ~~set of~~ content-specific convergence layers include ~~comprises~~ a convergence layer adapted ~~dedicated~~ to handle ~~handling~~ real-time critical data.

Claim 3 (Currently Amended): The network ~~Network~~ device according to claim 1, ~~wherein characterized in that~~ one of said content types is packet-based data, ~~wherein whereby~~ said at least two ~~set of~~ content-specific convergence layers include ~~comprises~~ a convergence layer adapted ~~dedicated to~~ handle ~~handling~~ packet-based data.

Claim 4 (Currently Amended): The network ~~Network~~ device according to claim 1, ~~wherein characterized in that~~ said external traffic is ~~being~~ at least one of Ethernet traffic, IEEE 1394 traffic, UMTS traffic or PPP traffic.

Claim 5 (Currently Amended): The network ~~Network~~ device according to claim 1, ~~wherein characterized in that~~ said network device includes ~~comprises~~ hardware connectivity for at least one of ~~one of~~ Ethernet traffic, IEEE 1394 traffic, UMTS traffic or PPP traffic.

Claim 6 (Currently Amended): The network ~~Network~~ device according to claim 1, ~~wherein characterized in that~~ said network device is an access point of said device network.

Claim 7 (Currently Amended): The network ~~Network~~ device according to claim 4 ~~[[1]]~~, ~~wherein characterized in that~~ said content detection layer is adapted to analyze ~~analyses~~ if said Ethernet traffic is real-time critical traffic, and is adapted to pass said Ethernet traffic, ~~whereby~~ in case said Ethernet traffic is real-time critical, ~~it is passed to~~ a convergence layer adapted ~~dedicated to~~ handle ~~handling~~ real-time critical data.

Claim 8 (Currently Amended): The network ~~Network~~ device according to claim 4 ~~[[1]]~~, ~~wherein characterized in that~~ said content detection layer is adapted to analyze ~~analyses~~

if said Ethernet traffic is not real-time critical traffic, and is adapted to pass said Ethernet traffic, ~~whereby~~ in case said Ethernet traffic is not real-time critical, ~~it is passed~~ to a convergence layer adapted ~~dedicated~~ to handle ~~handling~~ packet-based data.

Claim 9 (Currently Amended): The network ~~Network~~ device according to claim 4 ~~[[1]]~~, wherein ~~characterized in that~~ said content detection layer is adapted to analyze ~~analyses~~ if said IEEE 1394 traffic is packet-based data traffic, and is adapted to pass said IEEE 1394 traffic, ~~whereby~~ in case said IEEE 1394 traffic is packet-based data traffic, ~~it is passed~~ to a convergence layer adapted ~~dedicated~~ to handle ~~handling~~ packet-based data.

Claim 10 (Currently Amended): The network ~~Network~~ device according to claim 4 ~~[[1]]~~, wherein ~~characterized in that~~ said content detection layer is adapted to analyze ~~analyses~~ if said IEEE 1394 traffic is real-time critical data traffic, and is adapted to pass said IEEE 1394 traffic, ~~whereby~~ in case said IEEE 1394 traffic is real-time critical data traffic, ~~it is~~ ~~passed~~ to a convergence layer adapted ~~dedicated~~ to handle ~~handling~~ real-time critical data.

Claim 11 (Canceled).

Claim 12 (Currently Amended): The network ~~Network~~ device according to claim 1, wherein ~~characterized in that~~ said content-specific convergence layers are operable to be used simultaneously within the same device network.

Claim 13 (Currently Amended): A device ~~Device~~ network, comprising ~~including~~ at least a first and a second ~~[[one]]~~ network device, the first network device comprising: ~~according to claim 1.~~

a content detection layer adapted to detect the content type of external traffic received by said first network device, and to pass said external traffic, in dependence of the detected content type, to a content-specific convergence layer adapted to handle the respective content type; and

at least two content-specific convergence layers adapted to exchange network traffic with said second network devices of said device network via content-specific connections, wherein

said content-specific connections are adapted to the requirements of the respective content type,

the at least two content-specific convergence layers of said first network device include a common part, adapted to segment a data packet of said external traffic into a plurality of corresponding data packets of a device network's internal protocol, and adapted to reassemble data packets of said device network's internal protocol into corresponding data packets of the respective external traffic, and

the common part is adapted to segment data packets of said external traffic and reassemble data packets of said device network's internal protocol for each of said at least two content-specific convergence layers, and

the second network device comprising:

at least two further content-specific convergence layers adapted to exchange network traffic with said first network device of said device network via content-specific connections, wherein

said content-specific connections are adapted to the requirements of the respective content type,

the at least two further content-specific convergence layers of said second network device include a further common part, adapted to reassemble data packets of said

device network's internal protocol into corresponding data packets of a further external traffic, and

the common part is adapted to reassemble data packets of said device network's internal protocol for each of said at least two further content-specific convergence layers.

Claim 14 (Currently Amended): The device ~~Device~~ network according to claim 13, wherein characterized in that the at least two content-specific convergence layers and the at least two further content-specific convergence layers are adapted to set up and release content-specific connections are set up and released between the first and second network devices of said device network, with whereby a content-specific connection being ~~[[is]]~~ set up between one of said at least two ~~[[a]]~~ content-specific convergence layers ~~layers~~ of said ~~[[a]]~~ first network device which supports a certain content type, and the ~~[[a]]~~ respective content-specific convergence layer of said ~~[[a]]~~ second network device which supports the same content type.

Claim 15 (Currently Amended): The device ~~Device~~ network according to claim 13, wherein characterized in that the external traffic exchanged with said content-specific convergence layer of said first network device is ~~may be~~ of a different kind than the further external traffic exchanged with said content-specific convergence layer of said second network device.

Claim 16 (Currently Amended): The device ~~Device~~ network according to claim 13, wherein characterized in that the at least two content-specific convergence layers and the at least two further content-specific convergence layers are adapted to reserve a fixed bandwidth

for said content-specific connection in case said content-specific connection is for a content type which requires a quality of service feature, ~~a fixed bandwidth is reserved for said content-specific connection.~~

Claim 17 (Currently Amended): The device ~~Device~~ network according to claim 13, wherein characterized in that the at least two content-specific convergence layers and the at least two further content-specific convergence layers are adapted to register for each content-specific connection, the content type supported by said content-specific connection is ~~registered.~~

Claim 18 (Currently Amended): The device ~~Device~~ network according to claim 13, wherein characterized in that said device network is a wireless local area network (WLAN), or and in particular a HiperLAN/2 network.

Claim 19 (Currently Amended): The device ~~Device~~ network according to claim 13, wherein characterized in that the device network is adapted to ~~[[the]]~~ exchange ~~[[of]]~~ control messages and data packets between said first and second network device ~~different network devices of said device network is effected~~ according to a TDMA transmission scheme.

Claim 20 (Currently Amended): The device ~~Device~~ network according to claim 19, wherein characterized in that the device network is adapted to reserve a set of time slots of said TDMA transmission scheme ~~may be reserved~~ for a certain content-specific connection.

Claim 21 (Currently Amended): A method ~~Method~~ for transmitting data traffic via a device network, characterized by ~~the follow steps~~ comprising:

[[-]] detecting by a first network device a content type of external traffic arriving at the device network; [[,]]

[[-]] passing within said first network device said external traffic, in dependence of the detected content type, to a content-specific convergence layer adapted (25, 26, 44, 45) ~~dedicated~~ to handle ~~handling~~ the respective content type; [[, and]]

segmenting a data packet of the external traffic into a plurality of corresponding data packets of network traffic of an internal protocol, using a common part of convergence layers of said first network device;

[[-]] transmitting said data packets of the network traffic of the internal protocol to a second ~~other~~ network device ~~devices~~ (28, 29) via content-specific connections, wherein ~~whereby~~ said content-specific connections are adapted ~~suited~~ to the requirements of the respective content type; and

reassembling with the second network device said data packets of the device network's internal protocol into corresponding data packets of a second external traffic, using a further common part of further convergence layers of the second network device.

Claim 22 (Currently Amended): The method ~~Method~~ according to claim 21, further comprising: ~~characterized in that~~

setting up the content-specific connections ~~are set up~~ between said first and second [[two]] network devices before transmitting said network traffic between said first and second [[two]] network devices in accordance with said content type.

Claim 23 (Currently Amended): The method ~~Method~~ according to claim 21, further comprising: ~~characterized in that~~

releasing, after the network traffic between said first and second [[two]] network devices has been transmitted in accordance with said content type, said content-specific connection between said two network devices is ~~released~~.

Claims 24 (Currently Amended): ~~Computer program product comprising computer program means adapted to perform the method steps as defined in claim 21 when being executed on a computer, a digital signal processor or the like~~ A computer readable storage medium encoded with a computer readable program configured to cause an information processing apparatus to execute a method, the method comprising:

detecting by a first network device a content type of external traffic arriving at the device network;

passing within said first network device said external traffic, in dependence of the detected content type, to a content-specific convergence layer adapted to handle the respective content type;

segmenting a data packet of the external traffic into a plurality of corresponding data packets of network traffic of an internal protocol, using a common part of convergence layers of said first network device;

transmitting said data packets of the network traffic of the internal protocol to a second network device via content-specific connections, wherein said content-specific connections are adapted to the requirements of the respective content type; and

reassembling with the second network device said data packets of the device network's internal protocol into corresponding data packets of a second external traffic, using a further common part of further convergence layers of the second network device.

Claim 25 (Canceled).